



# ALAMEDA COUNTY CONGESTION MANAGEMENT AGENCY

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## Memorandum

March 9, 2009  
Agenda Item 6.2

**DATE:** February 27, 2009  
**TO:** Sunol Express Lane Joint Powers Authority  
**FROM:** Beth Walukas, Manager of Planning  
**SUBJECT:** I-680 Express Lane Project – Before Study Report

### Action Requested

The Sunol Express Lane Joint Powers Authority Board is requested to accept the attached *I-680 Express Carpool Lane Project Before Study - Final Existing Conditions*. A second evaluation will be conducted once the Express Lanes are open to traffic, but not later than three years after the first revenues are collected so that the performance of the Express Lane can be evaluated. The Final Report, comparing the before and after conditions, will then be submitted to the SCCLJPA and to the Legislature as required in Streets and Highways Code Section 149.5 (g).

### Discussion

The attached Draft *I-680 Express Carpool Lane Project Before Study - Final Existing Conditions* Report presents the goals, objectives, and evaluation results for the “Before” Express Lane conditions. The purpose the Before Study is to document existing conditions to establish a benchmark for the operation of the existing southbound mixed flow lanes and carpool lane on I-680 prior to the implementation of the Express Lane.

The evaluation of the Express Lane is required by Streets and Highways Code Section 149.5 (g) which states:

*Not later than three years after the administering agency first collects revenues from the program authorized by this section, the administering agency shall submit a report to the Legislature on its findings, conclusions, and recommendations concerning the demonstration program authorized by this section. The report shall include an analysis of the effect of the HOT Lanes on the adjacent mixed flow lanes and any comments submitted by the Departments of Transportation and California Highway Patrol regarding operation of the lane.*

In August 2008, the ACCMA, on behalf of the JPA, retained the services of Dowling Association, Inc. to develop the goals and objectives, the evaluation plan, collect the data and prepare the attached Existing Conditions Report. An After Conditions Report will be prepared in accordance with the requirements of Streets and Highways Code Section 149.5 (g) and will be brought back to the JPA at that time.

The Before and After evaluations will provide feedback on the performance of the system, particularly in relation to the overall goals of the Express Carpool Lane Project, which are to:

- Optimize the HOV lane usage to improve traffic throughput in the corridor
- Utilize this new revenue stream to help pay for transportation improvements and transit operations in the corridor
- Maintain LOS C or better for all Express Lane users
- Improve highway and transit in the corridor with revenues generated
- Employ new Intelligent Transportation System (ITS) technologies such as dynamic pricing and in-vehicle electronic enforcement

The following data was collected:

- Traffic volume surveys on freeway mainline and ramps
- Vehicle occupancy surveys
- Travel time data
- Transit ridership
- Accident data

The following conditions were observed:

*Travel speed:* During the morning peak period, traffic congestion occurs on the mixed flow lanes primarily between 8:00 and 9:00 a.m. with freeway speeds significantly reduced between the Mission Boulevard (south) and Andrade Road interchanges. No congestion was observed during the afternoon commute period and the carpool lane remains mostly in free flow condition throughout the morning and afternoon commute hours.

*Travel time savings:* The maximum travel time savings for vehicles using the HOV lane was over seven minutes during the a.m. peak period and one minute during the p.m. peak period.

*Travel time reliability:* During the hours of 8:00 to 9:00 a.m., the I-680 southbound corridor has the longest travel time, between 17 and 25 minutes. The afternoon travel time appears to be consistent, around 13 minutes.

*Vehicle occupancy:* In general, carpool vehicles with two or more passengers make up nine to fourteen percent of the total traffic composition. Truck traffic varies between four and six percent along the corridor.

*Transit vehicles and passengers:* Transit ridership in the study corridor is highest south of North Mission Boulevard, which can be attributed to VTA routes that connect the Fremont BART station to Milpitas and San Jose. Average daily transit ridership in the corridor ranges from 156 riders per day north of North Mission Boulevard to 2,811 between North Mission Boulevard and South Mission Boulevard to 2,014 south of South Mission Boulevard.

*Safety:* Data on total collisions in the corridor between 2005 and 2007 was collected from the California Highway Patrol. The highest number of collisions, ranging from 86 to 122, are found between Andrade and Sheridan (88 for the 3 year period), North Mission and Washington (122 for the three year period) and Auto Mall and South Mission (86 for the three year period).

Compared to the statewide average of 0.91 collisions per million vehicle miles, the study corridor has a lower rate of 0.61.

*HOV Lane violation enforcement:* The HOV lane violation rates on several of the corridor segments were significantly higher than expected. Violations ranged from as low as 7 percent to as high as 38 percent.

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